

Application No. 10/053,208

**REMARKS**

In her Final action, the Examiner rejected claims 36-42 and 50-56 under 35 U.S.C. 112, second paragraph. Accordingly, claims 36-42 and 50-56 have been cancelled in the amendment to the claims made supra.

Also, in her action, the Examiner rejected claims 16, 19, 21, 23-27 under 35 U.S.C. 103(a) as being unpatentable over Igarashi (US 2,166,496). The Igarashi patent claims alloys having a calcium range from 0.01% to 0.02%. The experimental data in the Igarashi patent is for test strips with 0.02%, 0.03%, 0.04% or 0.05%. No data are presented for alloys with calcium as low as 0.01%.

In the amendment to the independent claims made supra, the calcium range was changed to the range from 5 to 75 ppm, which may be rewritten as from 0.0005% to 0.0075%. It is believed that alloys having calcium compositions in this range are supported by information in the specification of the present application.

In paragraph [0029], a calcium range from 25-30 ppm is said to be effective when a Ti-B grain refiner is employed. A calcium range from 8-14 ppm is cited for a Ti-C grain refiner. In Table 1, Example # 5 and paragraph [0035], an ingot having 53 ppm Ca is found to have no pits, folds or cracks. In Figure 6a, Example # 7 is a crack-free ingot having approximately 58 ppm. (The graph was scaled to obtain 0.0058 % Ca, which is 58 ppm.) Likewise, Example # 8 is a crack-free ingot having approximately 38 ppm Ca.

Also, in Figure 6b, Example # 18 is a crack-free ingot having approximately 15 ppm Ca. Example # 5 is a crack free ingot having approximately 53 ppm Ca. (The substitute Figure 6b sent with the previous amendment, and the original Figure 6b are identical regarding these two examples.)

It is believed that the experimental data cited above demonstrate the utility of 7xxx aluminum alloys having a calcium range from 5 ppm to 75 ppm. The patent of Igarashi cites no experimental data for calcium levels below 0.02% (200 ppm), and Igarashi makes no claim to compositions below 0.01% Ca. It is believed, therefore, that it would not be obvious to employ concentrations below 75 ppm Ca based on Igarashi.

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The Examiner, therefore, is respectfully requested to withdraw her rejections of claims 16, 19, 21, 23-27 under 35 U.S.C. 103(a).

Further, in her action, the Examiner stated that claims 43-49 and 57-63 were allowable. In the amendment made supra, a minor wording change was made to claim 43. Furthermore, these claims were amended to have a narrower calcium range than they had prior to the present amendment. The calcium range for the independent claims 43 and 57 is now 75 ppm. As discussed above, it is believed that experimental data presented in the application supports this range. The Examiner, therefore, is respectfully requested to accept the narrowing of these claims in the present amendment, and to allow these claims.

Regarding objections to claims, the Examiner stated that claims 28-35 were rejected as depending from a rejected base claim, which is claim 16. By the amendment to claim 16 made supra, it is now believed that claim 16 is allowable. Accordingly, it is believed that claims 28-35 are now allowable, and the Examiner is respectfully requested to withdraw her objection to claims 28-35.

As a result of the preceding amendments and the discussion, it is believed that the application is now in condition for allowance, and a Notice of Allowance is earnestly solicited.

In the event the Examiner has further difficulties with the allowance of the present application, she is invited to contact the undersigned Agent for Applicants by telephone at (724) 337-6165 or the Agent's supervisor, Gary Topolosky at (724) 337-2772 to resolve any remaining questions or issues by interview and/or Examiner's Amendment as to any matter which may expedite the completion of the prosecution of the application.

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Respectfully submitted,

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